

PATENT
Customer No. 22,852
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Divisional Application of:) Parent Application:
Masaki ADACHI et al.) Serial No. 09/451,755
Serial No.: Not Yet Assigned) Filed: December 1, 1999
Filed: June 1, 2001) Group Art Unit: 2811
For: COMPOSITION FOR SEALING A) Examiner: N. Parekh
SEMICONDUCTOR DEVICE,)
SEMICONDUCTOR DEVICE AND)
METHOD OF MANUFACTURING THE)
SAME)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

Prior to the examination of the above application, please amend this application
as follows:

IN THE CLAIMS:

Please cancel claim 1 without prejudice to, or disclaimer of, the subject matter
thereof and add new claims 21-32 as follows.

--21. (New) A thermoplastic material suitable for sealing a part of a conducting
material and a semiconductor element electrically coupled with the conducting material,

wherein the thermoplastic material has thermoplastic properties and a thermal expansion coefficient of 6.0×10^{-5} [1/ $^{\circ}$ C] or less at a temperature of 80 $^{\circ}$ C to 130 $^{\circ}$ C.

22. (New) A thermoplastic material according to claim 21, wherein a line expansion coefficient is 4.75×10^{-5} [1/ $^{\circ}$ C] or less at a temperature of 150 $^{\circ}$ C to 200 $^{\circ}$ C.

23. (New) A thermoplastic material according to claim 21, wherein a line expansion coefficient ratio between a flow direction and a normal direction of the flow direction is 0.55 or more.

24. (New) A thermoplastic material according to claim 21, wherein the thermoplastic material has a bending strength after solidification of 74 MPa or more.

25. (New) A thermoplastic material according to claim 21, wherein an adhesion imparting agent is added to improve adhesion properties to another material by binding with a polar group.

26. (New) A thermoplastic material according to claim 21, further containing silica particles.

27. (New) A thermoplastic material according to claim 21, wherein the thermoplastic material is substantially free of fibrous material.

28. (New) A thermoplastic material according to claim 21, wherein the thermoplastic material is substantially free of thermosetting material.

29. (New) A thermoplastic material according to claim 21, wherein a product obtained by multiplying a value of a line expansion at 25 to 80°C plus a line expansion at 80 to 125°C after solidification, by a bending strength is 25 MPa or less.

30. (New) A thermoplastic material for sealing a semiconductor element, wherein the thermoplastic material has thermoplastic properties and a thermal expansion coefficient of 6.0×10^{-5} [1/ $^{\circ}$ C] or less at a temperature of 80°C to 130°C.

31. (New) A process for manufacturing a semiconductor device comprising:
electrically interconnecting a semiconductor element with one end of a
conducting material; and
sealing the semiconductor element and the one end of the conducting material
with a thermoplastic material according to claim 21.

32. (New) A process for manufacturing a semiconductor device comprising:
electrically interconnecting a semiconductor element with one end of a
conducting material; and
sealing the semiconductor element and the one end of the conducting material
with a thermoplastic material according to claim 30.--

REMARKS

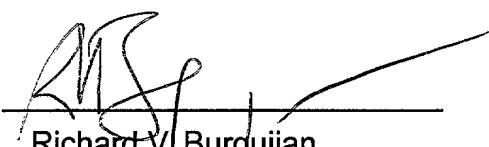
Applicants submit this Preliminary Amendment of this continuation application under 37 C.F.R. 1.53(b) and request its entry prior to examination.

Please grant any extensions of time under 37 C.F.R. § 1.136 required entering this response. If there is any fee due under 37 C.F.R. § 1.16 or 1.17, which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By:


Richard V. Burgujian
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Dated: June 1, 2001

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